

CLAIMS

1. An information processing device to which a plurality of information recording media can be simultaneously attached when said plurality of information recording media exist in which data stored in an information recording region is managed as a file by means of an individual file system, comprising:

a plurality of slots which are provided in a body of said information processing device to attach said respective information recording media;

a system memory which retains file system control information for recognizing individual file systems constructed in said plurality of information recording media and unifying and controlling the individual file systems into a single virtual file system;

a file system controller which manages a priority order concerning utilization of said plurality of information recording media, and which refers to slot information and open information included in said file system control information in response to a request from an application program so as to access a file in a logical information recording region of said information recording media; and

an access controller which accesses a slot and an

address designated by said file system controller, and
acquires data of a file.

2. The information processing device according to
5 claim 1, wherein

said file system controller once initializes said
file system control information in said system memory where
a state is initially set for said application program in a
manner that said information recording media are not
10 attached and that all of the files are not open, when said
information processing device is turned on.

3. The information processing device according to
claim 1, wherein

15 said file system controller sets the use priority
order of said slots in advance for the respective slots
when said information processing device is turned on.

4. The information processing device according to
20 claim 1, wherein

said file system controller creates slot information
in reference to data recorded on a management information
region of said information recording media and data in a
part of a data region and constructs a part of said file
25 system control information when said information recording

medium is attached to any of said plurality of slots.

5. The information processing device according to claim 1, wherein

5 when opening a specific file from said information recording medium, said file system controller refers to said slot information included in said file system control information, accesses all of the information recording media attached to the slots in an order based on said
10 priority order included in said file system control information, confirms whether or not a file designated by an application exists, creates open information when a designated file is initially discovered, registers a flag that indicates whether or not a file having the same name
15 exists with file information when the file having the same name exists in another information recording medium, and creates a file handle which is related to said open information.

20 6. The information processing device according to claim 1, wherein

 when reading out data of a specific file from said information recording medium, said file system controller refers to said open information by using a file handle
25 acquired at the time of file opening from said application,

determines which slot information is to be utilized, and gives the obtained slot number to said access controller in order to read out file data required for said application from a specific information recording medium.

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7. The information processing device according to claim 1, wherein

when recording file data on said information recording medium, said file system controller refers to
10 said open information by using a file handle acquired at the time of file opening from said application, determines which slot information is to be utilized, and gives the obtained slot number to said access controller in order to record file data produced by said application on a specific
15 information recording medium, and updates the slot information of the file system control information retained by said system memory.

8. The information processing device according to
20 claim 1, wherein

when closing a specific file from said information recording medium, said file system controller refers to said open information by using a file handle acquired at the time of file opening from said application, determines
25 a slot number that is being utilized, and gives the

obtained slot number to said access controller in order to record management information in a management information region of said specific information recording medium, and initializes the open information of the file.

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9. A file management method for managing data stored in respective information recording regions within a plurality of information recording media by means of a file system controller and an access controller of an

10 information processing device, wherein

setting a utilization priority order for a plurality of slots to which said information recording media are attached,

creating slot information in reference to data in a
15 management information region recorded in an information recording medium and data in a part of a data region when said information recording media are attached to any of said plurality of slots, and producing a part of file system control information through said file system
20 controller,

upon opening a specific file from an information recording medium, referring to said slot information included in said file system control information and said priority order included in said file system control
25 information, accessing all of the information recording

media attached to the slots, confirming whether or not a file that is designated by an application exists, creating open information when a designated file exists, registering a flag that indicates whether or not a file having the same
5 name exists with file information, and thereby, producing the rest of said file system control information, and thus constructing a unified file system where individual systems in said plurality of information recording media are unified through said file system controller,

10 upon reading out data of a specific file from said information recording medium, referring to open information of said file system control information by using a file handle acquired at the time of file opening from said application, determining which slot information is to be
15 utilized, and giving the obtained slot number to said access controller, and thereby reading out file data required for said application from a specific information recording medium through said file system controller, and

 upon recording file data on said information
20 recording medium, referring to said file system control information by using a file handle acquired at the time of file opening from said application determining which slot information is to be utilized, and giving the obtained slot number to said access controller, and thereby recording
25 file data produced by said application in a specific

information recording medium, and updating slot information of said file system control information through said file system controller.

5 10. The file management method according to claim 9, wherein

said plurality of information recording media are all managed by the same type of a file system.

10 11. The file management method according to claim 9, wherein

said plurality of information recording media are managed by different types of file systems.

15 12. The file management method according to claim 9, wherein

said file system controller uniquely specifies a file to be accessed on the basis of said priority order from among files having the same name that exist in said
20 plurality of information recording media.

13. The file management method according to claim 9, wherein

said file system controller confirms the existence of
25 files having the same name in said plurality of information

recording media, and gives the result to said application program.

14. The file management method according to claim 9,

5 wherein

said file system controller confirms the existence of files having the same name in said plurality of information recording media, and gives the result to said application program in response to a request from said application

10 program at an arbitrary time point.